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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/668,514
Filing Date: September 23, 2003
Appellant(s): SAYMAN ET AL.

Theodore W. Olds, Reg. No. 33,080
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 28 December 2005 appealing from the Office action mailed 5 August 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,125,316	Sasaki et al.	8-2000
4,788,446	Sterler et al.	11-1988
5,992,599	Hallenstvedt et al.	11-1999
4,131,036	Ivey et al.	12-1978
6,065,138	Gould et al.	5-2000
4,488,140	Lang et al.	12-1984
6,033,342	Steinel et al.	3-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4, 9,10 and 15 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (Sasaki; US Patent 6,125,316) in view of Sterler et al. (Sterler; US Patent 4,788,446) for the record.

Regarding claim 1, Sasaki discloses *Method Of And System For Deciding Failures Of Automatic Transmission* that has the following claimed subject matters:

The claimed vehicle driveline comprising at least one of a clutch and transmission is met by the lockup clutch and automatic transmission (column 3, lines 7-46);

The claimed vehicle driveline comprising a sensor for determining an undesired condition at said at least one of said clutch and said transmission, said sensor communicating with a control, said control communicating with a primary warning device to provide a warning to an operator of the vehicle of said undesired condition is met by the multiple sensors (S1-S5) and the shift failure decision section that determines that there was a failure of the transmission or lockup clutch and provides a failure signal with which a warning device provides a warning (column 3, lines 7-46, 57-68 and column 4, lines 4-33);

However, Sasaki does not specifically disclose the claimed said control being operable to monitor the operation of said primary warning device and actuate a secondary warning device should an indication be received that said primary warning device has failed. Sterler discloses *Monitoring Circuit For An Electric Or Electronic Module* that teaches a monitoring circuit that provides a secondary warning of failure if

the primary indicator is inoperative (column 1, lines 24-34). It would be beneficial to add the monitoring circuit to the device of Sasaki in order to provide a secondary warning indicator in the case that the primary warning indicator has failed. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki according to the teachings of Sterler to include a monitoring circuit to provide a secondary warning indicator when the primary warning indicator has failed.

Regarding claim 2, Sasaki and Sterler disclose all of the claimed limitations. The claimed system wherein the vehicle driveline includes both a clutch and a transmission is met by the lockup clutch and automatic transmission of Sasaki (column 3, lines 7-46).

Regarding claim 3, Sasaki and Sterler disclose all of the claimed limitations. The Examiner takes official notice that the claimed system wherein said secondary warning is audio is well known in the art and would have been obvious to one of ordinary skill in the art at the time of the invention to use an audible alarm as a secondary alarm.

Regarding claim 4, Sasaki and Sterler disclose all of the claimed limitations. The Examiner takes official notice that the claimed system wherein said secondary warning is a visual warning is well known in the art and would have been obvious to one of ordinary skill in the art at the time of the invention to use a visual alarm as a secondary alarm.

Regarding claim 9, Sasaki and Sterler disclose all of the claimed limitations. The claimed system wherein said sensor senses clutch slippage and said primary warning is provided to an operator to provide an indication of said clutch slippage, and if said primary warning device fails, said secondary warning is then actuated is met by the principle of the shift failure decision section determining the clutch slippage and comparing that to a table of maximum allowable clutch slippage and providing a warning if the clutch slippage exceeds the allowable value (Sasaki; column 4, lines 4-16), the secondary warning is provided when the monitoring circuit determines that the primary warning has failed as taught by Sterler.

Regarding claim 15, the claim is interpreted and rejected as claim 1 stated above.

3. Claims 5-7 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of Sterler and further in view of Hallenstvedt et al. (Hallenstvedt; US Patent 5,992,599) for the record.

Regarding claim 5, Sasaki and Sterler disclose all of the claimed limitations except for the claimed system wherein said secondary warning controls operation of a vehicle driveline component. Hallenstvedt discloses *Control System For Intermittently Pulsing A Valve Controlling Forward And Reverse Clutches A Transmission And*

Transmission Fitted Therewith that teaches a vehicle fault detector that has a control circuit that will either light a warning light or activate an engine cutoff device when a fault is detected (column 2, lines 46-56). Utilizing the control circuit and engine cutoff device of Hallenstvedt in the device of Sasaki and Sterler as a backup warning to the user would allow the device to protect the engine in the event that a fault is detected and the primary warning has failed, the engine would be cut off which would alert the user and prevent further damage that would be caused by the fault. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki and Sterler according to the teachings of Hallenstvedt to set up the secondary warning device to control operation of a vehicle driveline component, i.e. the engine.

Regarding claims 6 and 7, the claims are interpreted and rejected as claim 5 stated above.

4. Claim 8 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of Sterler, further in view of Hallenstvedt and further in view of Ivey et al. (Ivey; US Patent 4,131,036) for the record.

Regarding claim 8, Sasaki, Sterler and Hallenstvedt disclose all of the claimed limitations except for the claimed system wherein a vehicle brake system is actuated to provide said secondary warning. Ivey discloses *Method And Apparatus For*

Transmission Control System that teaches actuating a vehicle brake system when an error is detected in the transmission system (column 8, lines 3-31). Using the controller of Ivey to actuate the braking system of the vehicle when an error is detected would alert the user and slow down the vehicle, which would help to prevent further damage that would be caused by the fault. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki, Sterler and Hallenstvedt according to the teachings of Ivey to set up the secondary warning device to control operation of the vehicle brake system.

5. Claim 10 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of Sterler and further in view of Steinel et al. (Steinel; US Patent 6,033,342) for the record.

Regarding claim 10, Sasaki and Sterler disclose all of the claimed limitations except for the claimed system wherein a pair of sensors sense engine speed and transmission input shaft speed to identify clutch slippage. Steinel discloses *Drive Train Arrangement For A Motor Vehicle Driven By An Internal Combustion Engine* that teaches using two sensors to sense the engine speed and transmission speed and use those two sensed values to compute the amount of clutch slippage occurring (column 4, lines 57-67 and column 5, lines 1-15). Altering the device of Sasaki and Sterler to use a transmission speed sensor instead of theoretically computing the value would result in more accurate values being computed and a reduction of the computation time of the

overall system. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki and Sterler according to the teachings of Steinel to use a pair of sensors to sense engine speed and transmission speed to identify clutch slippage.

6. Claims 11-13, 16 and 17 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of Gould et al. (Gould; US Patent 6,065,138) for the record.

Regarding claim 11, Sasaki discloses the following claimed subject matters:

The claimed clutch and a sensor for monitoring clutch slippage is met by the lockout clutch, the plurality of sensors (S1-S5) and the shift failure decision section determining if a failure has occurred due to clutch slippage (column 3, lines 7-46, 57-68 and column 4, lines 4-33);

The claimed control for receiving a signal from said sensor indicating a clutch slippage, said control communicating with a warning device to provide a warning to an operator of said clutch slippage is met by the shift failure decision section of the control unit determining if a failure has occurred due to clutch slippage and providing a failure signal with which a warning device raises a warning (column 4, lines 4-33);

However, Sasaki does not specifically disclose said control being operable to change said warning should said clutch slippage continue over time. Gould discloses *Computer Activity Monitoring System* that teaches increasing the severity of a warning if

a particular event continues to occur over time and nothing is done to correct the situation (column 8, lines 23-34). It would be helpful to the user of the device of Sasaki to increase the severity of the warning if it continues to occur and nothing is done to correct it because if the problem were allowed to continue then the vehicle would be damaged. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki according to the teachings of Gould to be able to change the warning provided to the user should the failure continue to occur.

Regarding claim 12, Sasaki and Gould disclose all of the claimed limitations. The examiner takes official notice that it would have been obvious to increase the frequency of said warnings if said clutch slippage continues to occur. It is well known that one can increase the severity of a warning, as taught by Gould, by increasing the frequency of the warning signals, visual, audible or tactual, provided to the user.

Regarding claims 13, the claim is interpreted and rejected as claim 12 stated above.

Regarding claim 16, the claim is interpreted and rejected as claim 11 stated above.

Regarding claim 17, the claim is interpreted and rejected as claim 12 stated above.

7. Claims 14 and 18 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of Gould and further in view of Lang et al. (Lang; US Patent 4,488,140) for the record.

Regarding claim 14, Sasaki and Gould disclose all of the claimed limitations except for the claimed system wherein said increase in frequency occurs if said clutch has an increasing temperature. Lang discloses *Clutch Temperature Monitor* that teaches a clutch temperature monitor that generates warning signals when the temperature of the clutch increases beyond a certain level (abstract). Providing a clutch temperature sensor for the device disclosed by Sasaki and Gould would allow for added protection to the vehicle clutch by detecting another damaging event. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sasaki and Gould according to the teachings of Lang to include a clutch temperature sensor that provides a warning to the user.

Regarding claim 18, the claim is interpreted and rejected as claim 14 stated above.

(10) Response to Argument

8. Applicant's arguments filed in the appeal brief dated 28 December 2005 have been fully considered but they are not persuasive. The applicant makes the following arguments:

Argument A, applicant argues that Sterler would not propose modifying Sasaki because Sasaki does not utilize a single power circuit to power its transmission shifts or its clutch as well as its warning light. The warning light of Sasaki is separately actuated from the transmission control.

Argument B, applicant argues that the types of faults that are detected in Sasaki are quite distinct from that which is responded to in Hallenstvedt and as such there is no suggestion to stop operation of the engine of Sasaki taken with Hallenstvedt.

Argument C, applicant argues that Ivey does not suggest actuating a brake so as to provide a warning and instead actuates a brake as a control function.

Argument D, applicant argues that Gould is non-analogous art dealing with a computer or work-station and there is no proper suggestion to modify the warning of Sasaki according to Gould.

Argument E, applicant argues that Lang does not overcome the deficiencies in the base rejection of Sasaki taken with Gould and that Lang does not tie its temperature sensing into any change in the frequency of the warning.

Responses:

Regarding argument A, the difference in the way the two circuits of Sasaki and Sterler does not negate the fact that Sterler teaches a device for monitoring an electronic circuit such as the system for making a decision on a failure in shifting an automatic transmission of Sasaki wherein the device of Sterler provides both primary and secondary failure indicators so that if the primary failure indicator is faulty the secondary failure indicator is activated. One of ordinary skill in the art would have realized that the usefulness of Sterler would be in providing backup warning indications for any and all types of warning indicators, including those contained in the device of Sasaki.

Regarding argument B, simply because Sasaki and Hallenstvedt teach detecting different faults in order to react does not mean that one of ordinary skill in the art would not have combined the two. Hallenstvedt discloses a system with a fault detector for a vehicle transmission that "when the fault detector detects a fault has occurred in the one or more valves, a control circuit may light a warning light, or may activate an engine cutoff device to stop the engine from running during the fault." It would therefore be

obvious to one of ordinary skill in the art to combine the references to control the engine operation of the vehicle in order to cutoff the engine when a fault is detected because Hallenstvedt teaches responding to a fault with an engine cut-off. One of ordinary skill in the art would have realized that the procedure taught by Hallenstvedt would be able to be applied to any fault detected including the faults detected by Sasaki.

Regarding argument C, Ivey teaches a device that monitors the operation of an automatic transmission and engages a brake when an error is detected. One of ordinary skill in the art would have realized that the teachings of Ivey would be able to be applied to Sasaki in order to provide another way of not only warning the driver through a braking of the vehicle, which the driver would obviously notice and feel, but also a way to help slow down the vehicle when a problem occurred in order to more quickly bring the vehicle to a stop so that further damage to the vehicle and others would be limited.

Regarding argument D, Gould teaches a system that monitors warnings/alarms, such as the warning disclosed by Sasaki, over a period of time and provides an alarm/indication with an increasing level of severity as the user continues to ignore the alarm/indication. Gould teaches a method of increasing the alarm severity level in order to ensure that the user takes notice and doesn't allow the problem to persist. One of ordinary skill in the art would have realized that it would have been obvious to incorporate this method in the device of Sasaki in order to force the user to deal with the

potential problem with the transmission before more damage to the engine/transmission occurs.

The invention of Gould relates specifically to computer related warnings, however one of ordinary skill in the art would have realized that the method of increasing the intensity of the warning would be able to be applied to any form of warning in order to force the user to deal with the warning.

Regarding argument E, Lang does not need to overcome the deficiencies in the base reference because as shown above, no deficiencies exist in the base reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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